# CS 255 Business Requirements Document Template

Complete this template by replacing the bracketed text with the relevant information.

This template lays out all the different sections that you need to complete for Project One. Each section has guiding questions to prompt your thinking. These questions are meant to guide your initial responses to each area. You are encouraged to go beyond these questions using what you have learned in your readings. You will need to continually reference the interview transcript as you work to make sure that you are addressing your client’s needs. There is no required length for the final document. Instead, the goal is to complete each section based on your client’s needs.

**Tip:** You should respond in a bulleted list for each section. This will make your thoughts easier to reference when you move into the design phase for Project Two. One starter bullet has been provided for you in each section, but you will need to add more.

## System Components and Design

### Purpose

*What is the purpose of this project? Who is the client and what do they want their system to be able to do?*

* The Client, DriverPass wants to implement a system that helps users pass driving exams.
* DriverPass would like us to create a website that will educate its users, allow them to take online practice exams, and book classes with instructors.

### System Background

*What does DriverPass want the system to do? What is the problem they want to fix? What are the different components needed for this system?*

* DriverPass believes that this particular section of online learning is underserved and needs attention.
* DriverPass would like to address this issue by allowing its users to take online classes, exams, and provide the ability to pair its users with driving instructors.
* The system will need to have the ability to be accessed from anywhere.
* The system and its databases will need to track users progress, reservations, cancellations, user profiles and its modifications, as well as host multiple training packages.
* Permissions will need to be implemented for different user levels and security features.

### Objectives and Goals

*What should this system be able to do when it is completed? What measurable tasks need to be included in the system design to achieve this?*

* The completed website will need to be fully functional in regard to the previously stated system requirements. Booking, modifying, and canceling in-person driver education training for example.
* Cloud storage is necessary for users and administrators to access data from anywhere.
* Technical requirements will need to be addressed. Pre-mapping of the system prior to development will need to be established such as UML Diagrams, object and process models.

## Requirements

### Nonfunctional Requirements

#### Performance Requirements

*What environments (web-based, application, etc.) does this system need to run in? How fast should the system run? How often should the system be updated?*

* The application must be web based and databases will need accessed remotely using cloud-storage.
* The system needs to be fast enough for users to stream videos, take classes and tests, and store profile data.
* The system needs to be easily maintainable so that when the client requests modifications they will be easy to address. This is also important so that we can perform security updates as needed.

#### Platform Constraints

*What platforms (Windows, Unix, etc.) should the system run on? Does the back end require any tools, such as a database, to support this application?*

* The application will need to be available on all platforms as well as mobile.
* iOS and Android ready so that the system can be accessed remotely on mobile devices.
* Cloud databases for data access.

#### Accuracy and Precision

*How will you distinguish between different users?* *Is the input case-sensitive? When should the system inform the admin of a problem?*

* Users will have unique IDs that are associated with their account and student data. This will be validated with a username and password.
* For security it's best that both username and password are case sensitive.
* Login attempt limits will alert admin of a potential security issue. Error logs can be nested in the system for administrators to review any possible system issues.

#### Adaptability

*Can you make changes to the user (add/remove/modify) without changing code? How will the system adapt to platform updates? What type of access does the IT admin need?*

* SQL updates databases can update user data and account information. This will allow changes to be made without modifying the codebase.
* IT admin will need to have administrator privileges so they can fully audit and test the system as needed.
* The system will be updated incrementally as needed to add new features as well as update existing elements.

#### Security

*What is required for the user to log in? How can you secure the connection or the data exchange between the client and the server? What should happen to the account if there is a “brute force” hacking attempt? What happens if the user forgets their password?*

* Usernames and passwords will authenticate users and associated permissions. MFA can also be implemented.
* All data will be passed via cloud storage and secured by individual user validations.
* Features can be implemented that disable the account after too many failed login attempts have been made.
* Once an account is locked a user can answer security questions to unlock their account.
* Forgot Password links can be used to reset a user's password when needed.

### Functional Requirements

*Using the information from the scenario, think about the different functions the system needs to provide. Each of your bullets should start with “The system shall . . .” For example, one functional requirement might be, “The system shall validate user credentials when logging in.”*

* The system shall validate user credentials when logging in.
* The system shall offer practice tests and classes.
* The system shall allow users to reserve in-person lessons.
* The system shall show an image of the paired driver.
* The system shall offer three different training packages.
* The system shall be cloud based and easily accessed from anywhere.
* The system shall track user progress and display completed tests and the results.
* The system shall match user permissions with application functionality.

### User Interface

*What are the needs of the interface? Who are the different users for this interface? What will each user need to be able to do through the interface? How will the user interact with the interface (mobile, browser, etc.)?*

* Users should be able to access the interface from any computer or mobile device.
* The interface should allow administrators to edit and update all data across the website, cancel or modify student reservations.
* The interface needs to allow users to make reservations and view a calendar to pair with driving instructors.
* The interface will need to allow users to learn and take practice exams.
* The interface will need to have an area for a user profile.

### Assumptions

*What things were not specifically addressed in your design above? What assumptions are you making in your design about the users or the technology they have?*

* Users will know how to use a computer and or a mobile device.
* Users will have access to the internet.
* Users will have an active email account to create a new account and authenticate their accounts.

### Limitations

*Any system you build will naturally have limitations. What limitations do you see in your system design? What limitations do you have as far as resources, time, budget, or technology?*

* Possibly having to change the interface to accommodate for mobile devices.
* Development setbacks and bug fixes prior to delivery.
* Budgeting constraints – the team will need to have an appropriate amount of time to work on the project in relation to DriverPass’ budget.

### Gantt Chart

